

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for fabricating a bistable microelectromechanical system (MEMS) based system, comprising:  
  
lithographically defining a plurality of beams comprising a lowest beam and a highest beam ~~at least one beam~~ having a specified non-linear shape corresponding to a first stable state of the ~~at least one beam~~ plurality of beams;  
  
providing optical fibers between a position of the first stable state and a position of a second stable state and between the lowest beam and the highest beam;  
  
providing a stop to contact ~~the~~ at least one of the lowest beam and the highest beam before the at least one of the lowest beam and the highest beam reaches the position of the second stable state; and  
  
providing a ridge on the stop to reduce stiction between the stop and the at least one of the lowest beam and the highest beam;  
  
wherein the at least one of the lowest beam and the highest beam is biased against the stop.
2. (Currently Amended) The method of claim 1, further comprising lithographically defining the ~~at least one beam~~ plurality of beams to have a certain geometry.
3. (Currently Amended) The method of claim 2, wherein lithographically defining the ~~at least one beam~~ plurality of beams to have a certain geometry comprises lithographically defining the ~~at least one beam~~ plurality of beams to have a certain height and a certain width, wherein the height is greater than the width.

4. (Currently Amended) The method of claim 1, further comprising forming a stop that contacts the at least one of the lowest beam and the highest beam when the at least one of the lowest beam and the highest beam is between the first and second stable states and near the second stable state.

5. (Currently Amended) The method of claim 1, further comprising determining a second stable state of the ~~at least one beam~~plurality of beams by lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry.

6. (Currently Amended) The method of claim 5, wherein lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry comprises lithographically defining the ~~at least one beam~~plurality of beams to have at least one of a certain length, a certain width and a certain curvature.

7. (Currently Amended) The method of claim 6, wherein lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry further comprises lithographically defining the ~~at least one beam~~plurality of beams to have a certain height.

8. (Currently Amended) The method of claim 1, further comprising determining a throw distance of the ~~at least one beam~~plurality of beams between the first and second stable states by lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry.

9. (Currently Amended) The method of claim 8, wherein lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry comprises lithographically defining the ~~at least one beam~~plurality of beams to have at least one of a certain length, a certain width and a certain curvature.

10. (Currently Amended) The method of claim 9, wherein lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry further comprises lithographically defining the ~~at least one beam~~plurality of beams to have a certain height.

11. (Currently Amended) The method of claim 1, further comprising determining a force curve of the ~~at least one beam~~plurality of beams between the first and second stable states by lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry.

12. (Currently Amended) The method of claim 11, wherein lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry comprises lithographically defining the ~~at least one beam~~plurality of beams to have at least one of a certain length, a certain width and a certain curvature.

13. (Currently Amended) The method of claim 12, wherein lithographically defining the ~~at least one beam~~plurality of beams to have a certain geometry further comprises lithographically defining the ~~at least one beam~~plurality of beams to have a certain height.

14. (Currently Amended) The method of claim 1, further comprising forming at least one of a thermal actuator, an electrostatic actuator, a piezoelectric actuator and a magnetic actuator adjacent the ~~at least one beam~~plurality of beams.

15. (Currently Amended) The method of claim 14, wherein forming at least one of a thermal actuator, an electrostatic actuator, a piezoelectric actuator and a magnetic actuator adjacent the ~~at least one beam~~plurality of beams comprises forming a thermal impact actuator.

16. (Currently Amended) The method of claim 14, wherein forming at least one of a thermal actuator, an electrostatic actuator, a piezoelectric actuator and a magnetic

actuator adjacent the ~~at least one beam~~plurality of beams comprises forming a zippering electrostatic actuator.

17. (Currently Amended) The method of claim 1, further comprising forming at least one fixed boundary condition of ~~the~~-at least one of the lowest beam and the highest beam.

18. (Currently Amended) The method of claim 1, further comprising forming at least one bearing boundary condition of ~~the~~-at least one of the lowest beam and the highest beam.

19. (Currently Amended) The method of claim 1, further comprising forming at least one spring boundary condition of ~~the~~-at least one of the lowest beam and the highest beam.

20. (Currently Amended) The method of claim 1, wherein lithographically defining the ~~at least one beam~~plurality of beams comprises patterning the ~~at least one beam~~plurality of beams in a device layer of a silicon-on-insulator wafer.

21. (Currently Amended) The method of claim 20, further comprising defining a height of the ~~at least one beam~~plurality of beams using a thickness of the device layer.

22. (Currently Amended) The method of claim 20, further comprising partially etching an insulator layer between the device layer and a substrate to release the ~~at least one beam~~plurality of beams with part of the insulator layer remaining to anchor the ~~at least one beam~~plurality of beams to the substrate.